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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,395	02/12/2002	James W. McMichael	44598A	3836

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THE DOW CHEMICAL COMPANY
INTELLECTUAL PROPERTY SECTION
2301 N BRAZOSPORT BLVD
FREEPORT, TX 77541-3257

EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 06/20/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,395

Applicant(s)

MCMICHAEL ET AL. 

Examiner

Rip A. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) 1-40, 52-56, 70, 71 and 73-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 41-51, 57-69 and 72 is/are rejected.
- 7) ☒ Claim(s) 48 and 51 is/are objected to.
- 8) ☒ Claim(s) 1-83 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-29, drawn to a polymer composition, classified in class 526, subclass 346.
 - II. Claims 30-40, drawn to a process of making a polymer composition, classified in class 523, subclass 200.
 - III. Claims 41-72, drawn to a polymer composition with mechanically adhered anti-blocking agent, classified in class 524, subclass 451.
 - IV. Claims 73-83, drawn to a process for making a polymer composition with mechanically adhered anti-blocking agent, classified in class 523, subclass 313.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the claimed process can be used to prepare a materially different compositions, such as a polyamide composition, and the product can be made with a materially different process such as extrusion.

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3. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions have different effects because of the nature of incorporation of filler.

4. Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Whereas invention I relates to a general polymer composition, invention IV relates to a process for making a composition with mechanically adhered anti-blocking agent. Clearly, the two inventions have different functions and different effects.

5. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, invention II relates to a process of making a generic polymer composition, but invention III relates to a composition with mechanically adhered anti-blocking agent. Clearly, the two inventions have different functions and different effects.

6. Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions represent two different processes for making completely different materials. Therefore, they have different functions and different effects.

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7. Inventions IV and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the claimed process can be used to prepare a materially different compositions, such as a polyester composition, and the product can be made with a materially different process such as hand-mixing.

8. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

9. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, III, and IV, restriction for examination purposes as indicated is proper.

10. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III or IV, restriction for examination purposes as indicated is proper.

11. Because these inventions are distinct for the reasons given above and the search required for Group IV is not required for Group V, restriction for examination purposes as indicated is proper.

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12. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

13. This application contains claims directed to the following patentably distinct species of the claimed invention:

- (i) Claims 41-51, 57-69, and 72, drawn to a vinyl/vinylidene aromatic copolymer.
- (ii) Claim 52, drawn to an ethylene/vinyl acetate copolymer.
- (iii) Claims 53 and 54, drawn to a styrene block copolymer.
- (iv) Claim 55, drawn to a polyvinyl chloride polymer.
- (v) Claim 56, drawn to a propylene polymer.
- (vi) Claims 70 and 71, drawn to a thermoplastic polymer blend.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should Applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

14. During a telephone conversation with Lee Spencer on June 11, 2003, a provisional election was made with traverse to prosecute the invention of group III and species (i), claims 41-51 and 57-69. Affirmation of this election must be made by Applicant in replying to this Office action. Claims 1-40, 52-56, 70, 71, and 73-83 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

15. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

16. Claim 48 is objected to because of the following informalities: It is not clear how the amount of ethylene can be based on the moles of polymer units derived from styrene.

Appropriate correction is required.

17. Claim 51 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Since claim 50 uses the term "C₃-C₈ alpha olefin" specifically, the six possible embodiments recited in claim 51 are understood.

Claim Rejections - 35 USC § 112

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. Claim 61 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim uses the terms "organic acids" and "powdered polymers." Since these are not described adequately, and since the generic label encompassed hundreds of embodiments, without qualification, the claim remains vague and indefinite.

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Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. Claims 41-51, 57, 58, and 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,433,097 to Tawada *et al.* in view of U.S. Patent No. 5,739,200 to Cheung *et al.*

Tawada *et al.* discloses a process for producing a mechanical mixture of talc and polymer particles wherein talc may be partially adhered to polymer particles by embedding the filler within the polymer particles (col. 2, line 45-55). Calcium stearate is included in the composition as a stabilizer (col. 9, line 20 and col. 11, line 44). According to the inventors, the amount of talc lies within the range of 1-30 wt % (col. 4, line 28).

Cheung *et al.* teaches interpolymers comprising (1) 5-65 mole % of polymer units derived from (a) at least one vinylidene aromatic monomer, (b) at least one hindered aliphatic or

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cycloaliphatic vinylidene monomer, or (c) a combination of (a) and (b), and (2) 35-95 mole % of polymer units derived from at least one C₂₋₂₀ α -olefin.

Although the application of the Tawada *et al.* patent is focused on making PVC compositions, the inventors indicate that the composition may also contain ABS, MBS, chlorinated PE, and EVA resins. It can be gleaned from this teaching that the method would be applicable to a variety of host resins other than PVC. Therefore, one having ordinary skill in the art, having read and understood both references, would find it obvious to use the polymers of Cheung *et al.* in the same process described in Tawada *et al.* in order to arrive at the subject matter of present claims. The combination is obvious since the collective teachings of the references would have suggested to the skilled artisan that such an embodiment would work with a reasonable expectation of success.

23. Claims 41, 57-62, 64-69 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,060,510 to Himes *et al.*

Himes *et al.* teaches a dry blending process for preparing a composition comprised of a thermoplastic polymer selected from the group consisting of polystyrene, polyethylene, polypropylene, and mixtures thereof, talc, and plasticizer (claim 11). The amount of talc varies depending on end use, but it lies within the range of 0-150 phr (col. 5, line 10). The reference shows that dry blending occurs at a temperature between 175-250 °F (79-121 °C). In view of the fact that this mixing process is essentially the same as that disclosed in the present application (page 20, lines 12-28), a reasonable basis exists to believe that the process described in Himes *et al.* results in the formation of polymer particles containing talc particles mechanically adhered

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thereto. A sufficient basis also exists to believe that the properties recited in present claims 66-69 will be met since the processes described in the prior art and current application are the same. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

24. Claims 41-51, 57-62, 64-69, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/10015 to Park *et al.*

Park *et al.* discloses a mixture of granulated ethylene-styrene copolymer and 0.02 phr of talc (page 27, lines 29 and 31). This mixture is preblended, then fed into an extruder where it passes through a feeding zone at 160 °C and a transition zone at 177 °C, prior to the melting zone (page 27, line 36). In view of the fact that this mixing process is essentially the same as that disclosed in the present application (page 20, lines 12-28), a reasonable basis exists to believe that the process described in Park *et al.* causes sufficient softening of the polymer particle, resulting in the formation of polymer particles containing talc particles mechanically adhered thereto. A sufficient basis also exists to believe that the properties recited in present claims 66-69 will be met since the processes described in the prior art and current application are the same. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Since the patent also teaches the interpolymers of the present invention (see claims 1 and 2), the compositional features of claims 42-51 are obvious over Park *et al.*

Information Disclosure Statement

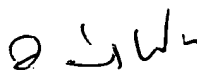
25. The references entitled "Derwent Information" have not been considered because appropriate bibliographical information has not been furnished.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

ral

June 12, 2003


DAVID W. WU
SUPERVISORY PATENT EXAMINER
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